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**UTILITY****PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 21723-0002

First Inventor WAND et al.

Title PLATE HEAT EXCHANGER WITH ENHANCED SURFACE FEATURES

Express Mail Label No. EU 692322460 US

PTO

0391 U S

10/643689

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

<p>1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) <i>(Submit an original and a duplicate for fee processing)</i></p> <p>2. <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.</p> <p>3. <input checked="" type="checkbox"/> Specification [Total Pages 25] <i>(preferred arrangement set forth below)</i> <ul style="list-style-type: none"> <li>- Descriptive title of the invention</li> <li>- Cross Reference to Related Applications</li> <li>- Statement Regarding Fed sponsored R &amp; D</li> <li>- Reference to sequence listing, a table, or a computer program listing appendix</li> <li>- Background of the Invention</li> <li>- Brief Summary of the Invention</li> <li>- Brief Description of the Drawings (<i>if filed</i>)</li> <li>- Detailed Description</li> <li>- Claim(s)</li> <li>- Abstract of the Disclosure</li> </ul> </p> <p>4. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets 13]</p> <p>5. Oath or Declaration [Total Sheets _____]           <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> Newly executed (original or copy)</li> <li>b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) <i>(for continuation/divisional with Box 18 completed)</i> <ul style="list-style-type: none"> <li>i. <input type="checkbox"/> <b>DELETION OF INVENTOR(S)</b> <i>Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</i></li> </ul> </li> </ul> </p> <p>6. <input checked="" type="checkbox"/> Application Data Sheet. See 37 CFR 1.76</p>	<p>7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (<i>Appendix</i>)</p> <p>8. Nucleotide and/or Amino Acid Sequence Submission (<i>if applicable, all necessary</i>)           <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> Computer Readable Form (CRF)</li> <li>b. <input type="checkbox"/> Specification Sequence Listing on:               <ul style="list-style-type: none"> <li>i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or</li> <li>ii. <input type="checkbox"/> Paper</li> </ul> </li> <li>c. <input type="checkbox"/> Statements verifying identity of above copies</li> </ul> </p>
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**ACCOMPANYING APPLICATION PARTS**

9. <input type="checkbox"/> Assignment Papers (cover sheet & document(s))	10. <input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of Attorney (when there is an assignee)
11. <input type="checkbox"/> English Translation Document (if applicable)	12. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input type="checkbox"/> Copies of IDS Citations
13. <input type="checkbox"/> Preliminary Amendment	14. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) <i>(Should be specifically itemized)</i>
15. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed)	16. <input type="checkbox"/> Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. <input checked="" type="checkbox"/> Other: <i>Certificate of Express Mailing, Copy of Foreign Patent from IDS Citation</i>	

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

Continuation       Divisional       Continuation-in-part (CIP)      of prior application No.: \_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_ Art Unit: \_\_\_\_\_

For CONTINUATION OF DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**

<input checked="" type="checkbox"/> Customer Number: 26587	OR	<input type="checkbox"/> Correspondence address below
Name		
Address		
City	State	Zip Code
Country	Telephone	Fax

Name (Print/Type)	Carmen Santa Maria	Registration No. (Attorney Agent)	33,453
Signature	<i>Carmen Santa Maria</i>	Date	August 19, 2003

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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# FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$)  
**1194***Complete if Known*

Application Number	
Filing Date	August 19, 2003
First Named Inventor	WAND et al.
Examiner Name	n/a
Group / Art Unit	n/a
Attorney Docket No.	21723-0002

**METHOD OF PAYMENT (check all that apply)**
 Check    Credit card    Money    Other    None  
 Order  
 Deposit Account

Deposit Account Number	50-1059
Deposit Account Name	McNees Wallace & Nurick LLC

The Commissioner is authorized to: (check all that apply)

 Charge fee(s) indicated below    Credit any overpayments  
 Charge any additional fee(s) during the pendency of this application  
 Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE****Large Entity**   **Small Entity**

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1001	750	2001	375	Utility filing fee	750
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

**SUBTOTAL (1)**

(\$ 750)

**2. EXTRA CLAIM FEES**

Total Claims	40	-20 **	= 20	Extra Claims	X 18	Fee from below		Fee Paid
Independent Claims	4	-3 **	= 1		X 84		= 84	
Multiple Dependent					X		= 0	

**Large Entity**   **Small Entity**

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1202	18	2202	9	Claims in excess of 20	
1201	84	2201	42	Independent claims in excess of 3	
1203	280	2203	140	Multiple dependent claim, if not paid ** Reissue independent claims over original patent	
1204	84	2204	42	** Reissue claims in excess of 20 and over original patent	
1205	18	2205	9		

**SUBTOTAL (2)**

(\$ 444)

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity	Small Entity	Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
		1051	130	2051	65	Surcharge - late filing fee or oath	
		1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
		1053	130	1053	130	Non-English specification	
		1812	2,520	1812	2,520	For filing a request for reexamination	
		1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
		1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
		1251	110	2251	55	Extension for reply within first month	
		1252	410	2252	205	Extension for reply within second month	
		1253	930	2253	465	Extension for reply within third month	
		1254	1,450	2254	725	Extension for reply within fourth month	
		1255	1,970	2255	985	Extension for reply within fifth month	
		1401	320	2401	160	Notice of Appeal	
		1402	320	2402	160	Filing a brief in support of an appeal	
		1403	280	2403	140	Request for oral hearing	
		1451	1,510	1451	1,510	Petition to institute a public use proceeding	
		1452	110	2452	55	Petition to revive – unavoidable	
		1453	1,300	2453	650	Petition to revive – unintentional	
		1501	1,300	2501	650	Utility issue fee (or reissue)	
		1502	470	2502	235	Design issue fee	
		1503	630	2503	315	Plant issue fee	
		1460	130	1460	130	Petitions to the Commissioner	
		1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)	
		1806	180	1806	180	Submission of Information Disclosure Stmt	
		8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
		1809	750	2809	375	Filing a submission after final rejection (37 CFR § 1.129(a))	
		1810	750	2810	375	For each additional invention to be examined (37 CFR § 1.129(b))	
		1801	750	2801	375	Request for Continued Examination (RCE)	
		1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)**

(\$ 0)

SUBMITTED BY						Complete (if applicable)	
Name (Print/Type)	Carmen Santa Maria	Registration No. Attorney/Agent)	33,453	Telephone	717-237-5226		
Signature	<i>Carmen Santa Maria</i>		Date	August 19, 2003			

**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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## CERTIFICATE OF EXPRESS MAILING UNDER 37 C.F.R. 1.10

I hereby certify that the following documents are being deposited with the United States Postal Service Express Mail Post Office to Addressee service under 37 C.F.R. 1.10 on the date indicated below, Express Mail Label Number **EU 692322460 US**, dated August 19, 2003 and addressed to:

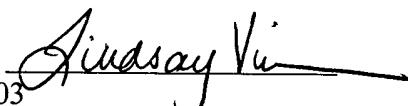
Mail Stop PATENT APPLICATION  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

1. Return Acknowledgment Postcard
2. Utility Patent Application Cover Sheet
3. Fee Transmittal Form
4. Patent Application (25 Pages)
5. Drawings (13 sheets)
6. Application Data Sheet
7. Information Disclosure Statement
8. PTO/SB/08
9. Reference Cited (1 foreign patent)

By: (Type signature) Lindsay Vican

Written Signature:

Date: August 19, 2003

A handwritten signature in black ink that reads "Lindsay Vican". The signature is written in a cursive style with a horizontal line underneath it.